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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,407	01/29/2007	Gwang-Hoon Park	Q90567	3702

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EXAMINER	
ANYIKIRE, CHIKAODILI E	

ART UNIT	PAPER NUMBER
2621	

NOTIFICATION DATE	DELIVERY MODE
09/30/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/553,407	PARK, GWANG-HOON	
	Examiner	Art Unit	
	CHIKAODILI E. ANYIKIRE	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 January 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This application is responsive to application number (10/5543407) filed on January 29, 2007. Claims 1-22 are pending and have been examined.

Information Disclosure Statement

2. Acknowledgement is made of applicant's information disclosure statement.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 7-9, 13-15, and 17-22 rejected under 35 U.S.C. 102(b) as being anticipated by Chia-Chiang Ho et al, "Toward User Oriented Scalable Video by Using Foveated FGS Bitstreams", IEEE Communications and Multimedia Lab, National Taiwan University, Taipei, Taiwan, pages 46-47, June 2003(hereafter referred to as Chia-Chiang Ho).

As per **claim 1**, Chia-Chiang Ho discloses a video processing method comprising: determining a position of an area-of-interest which a user gazes at in a current image being displayed, by using gaze detection (page 46, paragraph III, lines 2-

4; Chia-Chiang Ho teaches the point of gaze); selecting a base layer bitstream and enhancement bitstream of a video object containing the area-of-interest in an input bitstream (page 46, paragraph III, lines 4-7; Chia-Chiang Ho teaches using an FGS encoder which in the art is know to consist of the base and enhancement layers); and scalably decoding the base layer bitstream and the enhancement layer bitstream of the video object (Fig 1 element "decoder"; page 47, paragraph III, Section C, lines 9-11).

As per **claim 2**, Chia-Chiang Ho discloses the method of claim 1, wherein the input bitstream is a scalable bitstream in which each of a plurality of video objects is scalably coded (page 46, paragraph I lines 8-13, Chia-Chiang Ho teaches the use of MPEG-4 compression which refers to video object planes).

As per **claim 3**, Chi-Chiang Ho discloses the method of claim 1, wherein the gaze detection is to determine the position of the area-of-interest by estimating motion of a head or eyes of the user (page 46, paragraph III, lines 2-4; Chia-Chiang Ho teaches the point of gaze).

Regarding **claim 7**, arguments analogous to those presented for claim 1 are applicable for claim 7.

Regarding **claim 8**, arguments analogous to those presented for claim 2 are applicable for claim 8.

Regarding **claim 9**, arguments analogous to those presented for claim 3 are applicable for claim 9.

Regarding **claim 13**, arguments analogous to those presented for claim 1 are applicable for claim 13.

Regarding **claim 14**, arguments analogous to those presented for claim 2 are applicable for claim 14.

Regarding **claim 15**, arguments analogous to those presented for claim 3 are applicable for claim 15.

Regarding **claim 17**, arguments analogous to those presented for claim 1 are applicable for claim 17.

Regarding **claim 18**, arguments analogous to those presented for claim 2 are applicable for claim 18.

Regarding **claim 19**, arguments analogous to those presented for claim 3 are applicable for claim 19.

Regarding **claim 21**, arguments analogous to those presented for claim 1 are applicable for claim 21.

Regarding **claim 22**, arguments analogous to those presented for claim 1 are applicable for claim 22.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 4-6, 10-12, 16, and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Chia-Chiang Ho et al, "Toward User Oriented Scalable Video by Using Foveated FGS Bitstreams", IEEE Communications and Multimedia Lab, National Taiwan University, Taipei, Taiwan, pages 46-47, June 2003(hereafter referred to as Chia-Chiang Ho) in view of Geisler et al US 6,252,989 (hereafter Geisler).

As per **claim 4**, Chia-Chiang Ho discloses the method of claim 2.

However, Chia-Chiang Ho does not explicitly teach wherein the input bitstream includes positional information of the plurality of video objects included in each image, and in selecting the bitstreams, the positional information of the area-of-interest is compared with the positional information of the plurality of video objects included in the input bitstream, and the base layer bitstream and enhancement layer bitstream of the video object containing the area-of-interest are selected.

In the same field of endeavor, Geisler teaches wherein the input bitstream includes positional information of the plurality of video objects included in each image, and in selecting the bitstreams, the positional information of the area-of-interest is compared with the positional information of the plurality of video objects included in the

input bitstream, and the base layer bitstream and enhancement layer bitstream of the video object containing the area-of-interest are selected (column 11 lines 45 – 57).

Therefore, it would have been obvious for one having ordinary skill in the art at the time of the invention of Chia-Chiang Ho in view of Geisler. The advantage of the modification being able to greatly reduce the transmission bandwidth of images.

As per **claim 5**, Chia-Chiang Ho discloses the method of claim 2.

However, Chia-Chang Ho does not explicitly teach further comprising: selecting the enhancement layer bitstream of the remaining video objects except the video object containing the area-of-interest in the input bitstream; and discarding the selected enhancement layer bitstream of the remaining video objects not to be decoded.

In the same field of endeavor, Geisler teaches further comprising: selecting the enhancement layer bitstream of the remaining video objects except the video object containing the area-of-interest in the input bitstream; and discarding the selected enhancement layer bitstream of the remaining video objects not to be decoded (column 11 lines 45-47).

Therefore, it would have been obvious for one having ordinary skill in the art at the time of the invention of Chia-Chiang Ho in view of Geisler. The advantage of the modification being able to greatly reduce the transmission bandwidth of images.

As per **claim 6**, Chia-Chang Ho discloses the method of claim 1.

However, Chia-Chang Ho does not explicitly teach wherein the video object is one frame when the input image is a multiframe image, and is a video content when one frame image is divided into a plurality of video contents.

In the same field of endeavor, Geisler teaches wherein the video object is one frame when the input image is a multiframe image, and is a video content when one frame image is divided into a plurality of video contents (column 3 lines 25 – 64 and column 4 lines 31 - 58).

Therefore, it would have been obvious for one having ordinary skill in the art at the time of the invention of Chia-Chiang Ho in view of Geisler. The advantage of the modification of Chia-Chiang Ho in view of Geisler being able to greatly reduce the transmission bandwidth of images.

Regarding **claim 10**, arguments analogous to those presented for claim 4 are applicable for claim 10.

Regarding **claim 11**, arguments analogous to those presented for claim 5 are applicable for claim 11.

Regarding **claim 12**, arguments analogous to those presented for claim 6 are applicable for claim 12.

Regarding **claim 16**, arguments analogous to those presented for claim 4 are applicable for claim 16.

Regarding **claim 20**, arguments analogous to those presented for claim 4 are applicable for claim 20.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHIKAODILI E. ANYIKIRE whose telephone number is

(571)270-1445. The examiner can normally be reached on Monday to Friday, 7:30 am to 5 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272 - 7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

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